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The Naudé species of South African Cicadellidae (Hemiptera). III. Species assigned to the genera *Chlorotettix* Van Duzee, *Thamnotettix* Zetterstedt, *Euscelis* Brullé, *Scaphoideus* Uhler and *Selenocephalus* Germar

by

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Chlorotettix parabolatus is transferred to the genus *Tetartostylus* Wagner and the new genera *Renosteria* and *Hiltus* are erected for *C. spadix* and *C. africanus* respectively. *Thamnotettix angulata* is transferred to the genus *Neoaliturus* Distant and *T. rugulans* to *Recilia* Edwards; *T. decimnotatus* could not be placed as no males are available. *Euscelis conicus* is transferred to *Caffrolix* Linnavuori, *E. rosea*, *E. chloridula* and *E. petteyi* to *Bonaspeia* Linnavuori, *E. adspersa* to *Tzitzikamaia* Linnavuori and the new genera *Bloemia*, *Johanus* and *Hadroca* are erected for *E. hieroglyphica*, *E. cypraea* and *E. ramosa* respectively. *Scaphoideus cuprescens* is transferred to a new genus *Capoideus* and *Selenocephalus planescens* is transferred to the genus *Distantia* Signoret. Two new species are also described, *i.e. Hiltus gilvus* and *Bonsapeia ceresi*.

Tetartostylus parabolatus (Naudé)

Chlorotettix parabolatus Naudé, 1926: 77
Tetartostylus longistylus Linnavuori, 1961: 483

This species was described in detail elsewhere (Theron, 1973).

RENOSTERIA gen. nov.

Type-species: *Chlorotettix spadix* Naudé.

This species belongs neither in the genus *Chlorotettix* Van Duzee, nor in the genus *Tetartostylus* Wagner, to which Linnavuori (1961) has assigned it. A new genus of Euscelini, namely *Renosteria*, with the following characteristics, is therefore proposed here.

Head wider than pronotum; crown medially longer than next eyes, anteriorly broadly rounded to face. Discal region of crown smooth, frontal region and face with fine nodular sculpture. Coronal suture long. Ocellus separated from eye by distance equal to its diameter. Fronto-clypeus broad, wedge-shaped; ante-clypeus parallel-sided. Genae only weakly notched below eyes. Ocellocular region about twice width of gena below lorum.

Lateral margins of pronotum short. Tegmina with two closed anteapical cells and very narrow appendix. Spinulation of fore tibia 1 + 4; hind femoral setal formula 2 + 2 + 1.

Pygofer deeply incised mid-dorsally by anal tube. 10th tergite well sclerotized. Pygofer lobe with macro-setae and posteriorly with pointed process or hook. Plates separate, long, triangular, with irregularly arranged macro-setae (fig. 3). Valve triangular. Aedeagus symmetrical, curving dorsally. Socle with bifurcating appendage below shaft. Connective with short, broad stem articulating with socle (fig. 4); basal arms well separated. Styles with indistinct preapical angles and divergent apophyses (fig. 6). 7th abdominal sternite of female long.

This genus appears to be confined to the shrub *Elytropappus* and includes several distinct species. Only the type-species will be described here.

Renosteria spadix (Naudé), **comb. nov.,** figs 1–7

Chorotettix spadix Naudé, 1926: 77–78
Tetartostylus spadix (Naudé); Linnavuori, 1961: 483

MALE. Length from apex of crown to tips of tegmina 3,68–3,96 mm. Ground colour yellowish. Width of head across eyes 1,1–1,14 mm. Crown about as long medially as pronotum (fig. 1); discal region usually hyaline. Fronto-clypeus with distinct or indistinct horizontal arcs. Maximum width of pronotum 0,96–1,02 mm, posterior part hyaline. Scutellum yellow. Tegmina with coastal region milky, sometimes yellowish-green up to R1a; clavus milky marginally; disc light brown, semi-opaque.

Abdominal dorsum and triangular ventral area at base of abdomen dark. Anal tube deeply invading pygofer, so that latter is represented mid-dorsally only by bar. Pygofer lobes triangular (fig. 2), each postero-dorsally with group of about 12 macro-setae; inner edge terminally with conspicuous, pointed, strongly sclerotized, hooked process. Aedeagus large (figs 4 & 5), with shaft evenly curving dorsally and with gonopore sub-apical on ventral surface. Socle with large bifurcating process arising some distance below shaft.

FEMALE. Length from apex of crown to tips of tegmina 3,88–4 mm; width across eyes 1,2–1,24 mm; maximum width of pronotum 1,04–1,06 mm. 7th abdominal sternite long, hind margin usually notched medially (fig. 7).

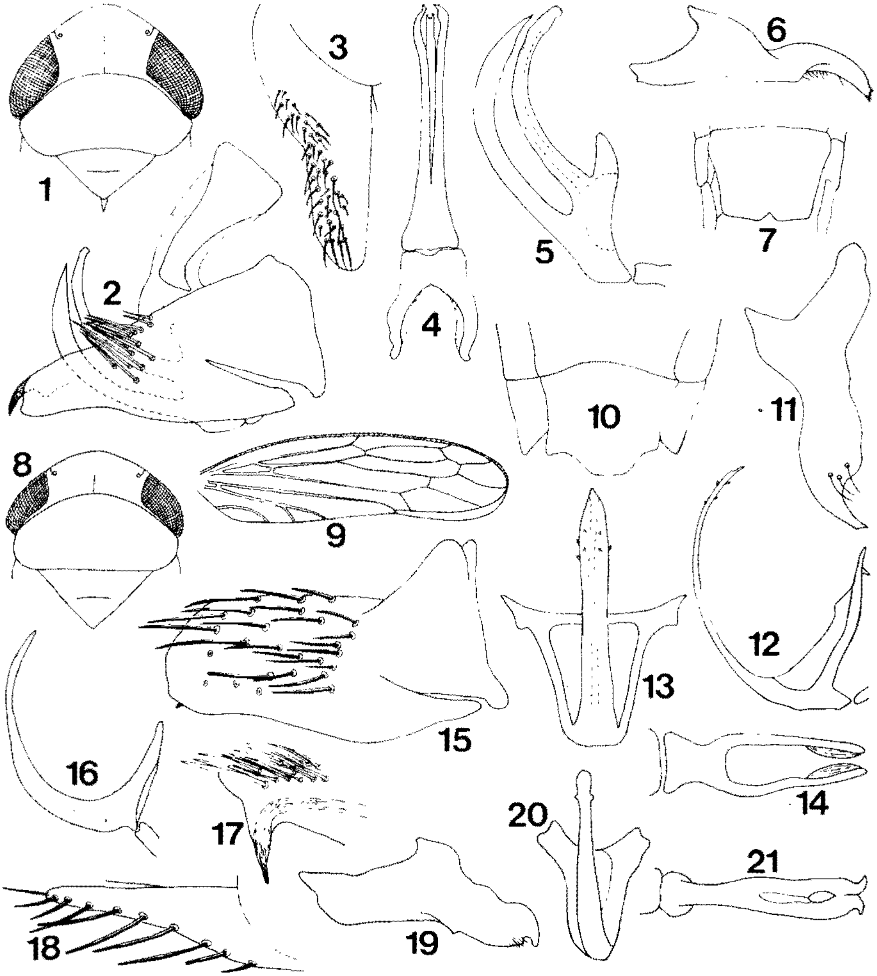
MATERIAI EXAMINED. Naudé described this species from 4 males collected at Ceres, C.P. by F. W. Pettey (April, 1923). Three of these males (the type and two paratypes) are still present in the collection. Numerous specimens of this species, collected on renosterbos (*Elytropappus rhinocerotis*) at De Doorns, were however also available for study.

HILTUS gen. nov.

Type-species: *Chlorotettix africanus* Naudé.

This species superficially resembles the species of *Tetartostylus* but examination of the genitalia of a male associable with the female types, showed that it belongs to the tribe Jassargini and cannot be included in the genus *Chlorotettix* either. A new genus, *Hiltus*, with the following characteristics, is therefore proposed.

Elongate leafhoppers with head wider than pronotum. Crown medially slightly longer than next eyes, rounded to fronto-clypeus, uniformly granular, frontal and discal regions not differentiated. Coronal suture distinct. Distance between ocellus and adjacent eye about equal to diameter of ocellus. Fronto-clypeus with indistinct arcs. Ante-



Figs 1–21. South African Cicadellidae. 1–7. *Renosteria spadix* (Naudé). 1–6. Holotype male. 1. Head, pronotum and scutellum, dorsal view. 2. Pygofer, lateral view. 3. Right plate, ventral view. 4. Connective and aedeagus, ventral view. 5. Aedeagus, lateral view. 6. Right style, ventral view. 7. Seventh abdominal sternite of female. 8–15. *Hiltus africanus* (Naudé). 8–10. Holotype female. 8. Head, pronotum and scutellum, dorsal view. 9. Tegmen. 10. Seventh abdominal sternite. 11–15. Male. 11. Right style, ventral view. 12–13. Aedeagus, lateral and ventral views. 14. Connective. 15. Right pygofer lobe. 16–21. *Hiltus gilvus* spec. nov., holotype male. 16. Aedeagus, lateral view. 17. Apex of right pygofer lobe, ventral view. 18. Left plate, ventral view. 19. Style, ventral view. 20. Aedeagus, ventral view. 21. Connective.

clypeus narrowing distally. Gena below lorum much narrower than ocellocular region and weakly notched below eye.

Lateral margin of pronotum very short, non-carinate. Tegmina with 2 closed ante-apical cells and narrow appendix (fig. 9). Hind wings with 4 apical cells. Spinulation of fore tibiae 1 + 4 or 1 + 5; hind femoral setal formula 2 + 2 +2 or 2 + 2 + 1.

Anal tube of male without distinct 10th tergite. Pygofer elongate, deeply incised mid-dorsally by anal tube. Pygofer lobe with macrosetae and postero-ventrally with process, directed medially. Plates (in *H. gilvus* spec. nov.) long, fused with triangular valve (fig. 18); mesal margins basally contiguous for some distance, ventro-laterally with uniseriate macro-setae.

Connective linear, articulated to aedeagus, basal arms contiguous. No pseudostyli. Aedeagus dorso-ventrally flattened, sickle-shaped and curving dorsally; gonopore apical. Socle large, with pair of processes which are in contact with base of anal tube. Apophyses of styles short, diverging.

Hiltus africanus (Naudé), **comb. nov.,** figs 8–15

Chlorotettix africanus Naudé, 1926: 76–77

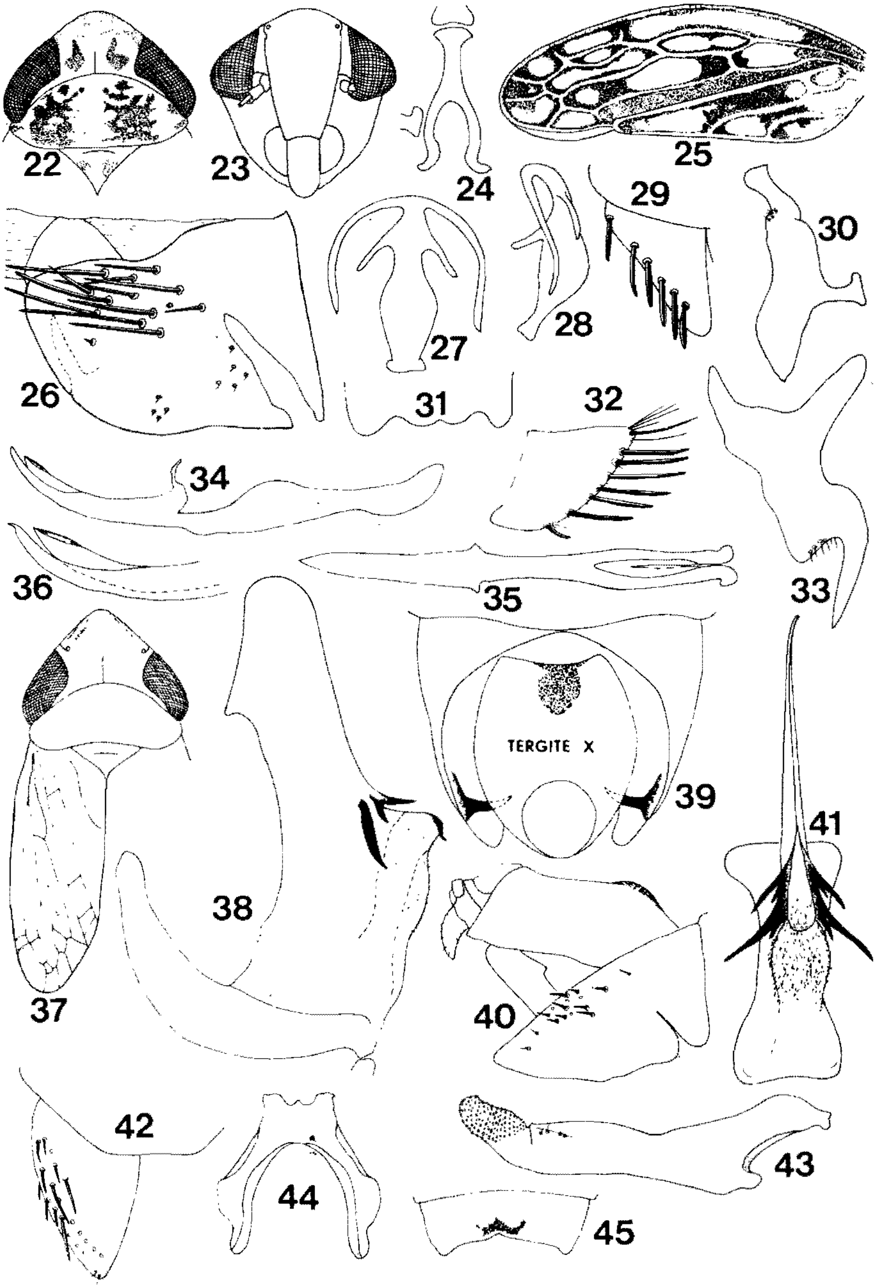
FEMALE. Length from apex of crown to tips of tegmina 5,7–5,81 mm. Body and tegmina pale yellowish-green, but abdominal dorsum dark. Width of head across eyes 1,5–1,54 mm. Maximum width of pronotum 1,35–1,42 mm; pronotum about twice as long medially as crown (fig. 8). 7th abdominal sternite short and rounded behind (fig. 10).

MATERIAL EXAMINED. Apart from two females, labelled type and paratype respectively (both collected by E. S. Cogan at Hilton Road, Natal, 14.iii.1917), another female with the same collectors data, and a female collected by E. S. Cogan at Cedara, Natal (2.iii.1917) were also available for study. Mounted on the same pin with the latter female, was an obviously conspecific male, which although somewhat damaged, is described below.

MALE. Length from apex of crown to tips of tegmina 5,25 mm. Width across eyes 1,32 mm. Maximum width of pronotum 1,18 mm. Pygofer lobe long, rounded behind, bearing about 25 macro-setae; postero-ventrally with small medially directed process (fig. 15). Valve triangular. Structure of plates unknown, as they are missing in this male. Aedeagus flattened dorso-ventrally, terminally with small teeth (figs 12 &

EXPLANATION OF FIGURES

Figs 22–45. South African Cicadellidae. 22–31. *Neoaliturus angulatus* (Naudé). 22–30. Holotype male. 22. Head, pronotum and scutellum, dorsal view. 23. Face. 24. Connective. 25. Tegmen. 26. Pygofer, lateral view. 27–28. Aedeagus, ventral and lateral views. 29. Plate, ventral view. 30. Left style, ventral view. 31. Allotype female, hind margin of 7th abdominal sternite. 32–36. *Recilia rugulans* (Naudé), allotype male. 32. Right plate, ventral view. 33. Right style, ventral view. 34 & 35. Aedeagus, lateral and ventral views. 36. Apex of aedeagus, lateral aspect, enlarged. 37–45. *Caffrolix conicus* (Naudé). 37–44. Holotype male. 37. Head, thorax and tegmen, dorsal view. 38. Aedeagus, lateral view. 39. Pygofer, dorsal view (apical segments of anal tube omitted). 40. Pygofer, lateral view. 41. Aedeagus, posterior view. 42. Plate and part of valve. 43. Right style, ventral view. 44. Connective. 45. Paratype female, 7th abdominal sternite.


TERGITE X

13). Socle extensive, dorsal rim with medial tooth. Stem of connective short (fig. 14). Style with apex of apophysis truncate (fig. 11).

As the plates are missing in this unique male specimen of *africanus*, a description of a closely related new species of the genus *Hiltus* (with these structures intact) is given below.

Hiltus gilvus spec. nov., figs 16–21

MALE. Length from apex of crown to tips of tegmina 4,3–4,32 mm. Body colour uniformly pale yellow; tegmina almost white, opaque. Width of head across eyes 1,2–1,22 mm. Maximum width of pronotum 1,35–1,42 mm.

Pygofer generally as in *africanus*, but posterior half of pygofer lobe with numerous macro-setae and pygofer process long and sharply pointed (fig. 17). Plates narrow, pointed apically, basally contiguous for about half their length and fused with valve; each plate with 9 uniseriate macro-setae (fig. 18). Aedeagus with distal part flattened and bearing two small sub-apical teeth, but basal part tubular (figs 16 & 20). Two dorsal arms of socle articulating with small rounded sclerites at base of anal tube. Connective slender (fig. 21), with stem longer than in *africanus*. Apophyses of styles very short (fig. 19).

FEMALE. Length 5,6 mm, width of head across eyes 1,38–1,44 mm, maximum width of pronotum 1,22–1,3 mm. 7th abdominal sternite rounded behind, but slightly notched medially.

MATERIAL EXAMINED. SWAZILAND: ♂ Holotype, Hluti, 27.xii.1968. J. G. Theron, by sweeping. In National Collection of Insects, Plant Protection Research Institute, Pretoria. Paratypes: 1 ♂, same data, 30.xii.1968; 2♀♀ Croydon (Phemba), 1.i.1969, J. G. Theron, by sweeping. In National Collection of Insects, Plant Protection Research Institute, Pretoria and University of Stellenbosch Collection.

Neoaliturus angulatus (Naudé), **comb. nov,** figs 22–31

Thamnotettix angulata Naudé, 1926: 74

HOLOTYPE MALE. Length from apex of crown to tips of tegmina 2,48 mm. Head wider than pronotum, width across eyes 0,82 mm; whitish with brownish areas. Anterior margin of crown distinctly angulate, rounded to face. Crown about 1,4 times longer medially than next eyes, marked with brown as in fig. 22; discal region smooth, frontal region granular. Coronal suture short. Fronto-clypeus long, narrow, two times broader dorsally than ventrally (fig. 23) and with faint brownish horizontal arcs. Ante-clypeus narrowing ventrally and exceeding ventral limits of genae. Gena only shallowly notched below eye.

Pronotum whitish with fuscous areas; maximum width 0,78 mm; lateral margins very short. Tegmina short, only slightly longer than abdomen; whitish, with fuscous areas (fig. 25); appendix present; peripheral vein arising from elytral margin in 2nd apical cell; two closed anteapical cells, with outer one small.

Pygofer fairly deeply invaded dorsally by anal tube. Pygofer lobe as in fig. 26, bearing about 10 macro-setae; inner wall posteriorly with dorsally-directed spine-like process. Tenth tergite well sclerotized. Valve triangular. Plates triangular, bearing 5 or 6 stout uniseriate macro-setae (fig. 29).

Aedeagus symmetrical, with two gonopores situated apically on curved terminal extensions, which together form a semi-circle (figs 27 & 28); below terminal extensions of aedeagus are a pair of short processes directed obliquely towards base of aedeagus; socle broad. Connective Y-shaped (fig. 24). Styles with inconspicuous pre-apical angles, diverging apophyses and long ventral apodemes (fig. 30).

FEMALE. Width of head across eyes 0,85 mm; maximum width of pronotum 0,78 mm. Hind margin of 7th abdominal sternite as in fig. 31.

MATERIAL EXAMINED. Naudé described this species from 3 males and 3 females, but only 1 male labelled type (here regarded as the holotype and collected by J. C. Faure, Petrusburg, O.F.S., iv.1918), 1 female (colour very faded and tegmina damaged) labelled allotype (same data) and 2 males labelled paratype (same data, but dated 22–25.iv.1918) are now present in his collection. In the two paratype males (one perhaps parasitized) the tegmina are shorter than the abdomen (length from apex of crown to tips of tegmina only 2,1 mm). Even the holotype male must be brachypterous, as in two other males, collected at Beaufort West (J. G. Theron, 1.vii.1971), the tegmina are considerably longer (length from apex of crown to tips of tegmina 3,16 mm) than in the holotype.

Angulatus is here referred to the genus *Neoaliturus* Distant, as defined by Oman (1970). The two South African species *karooensis* (Cogan) and *struthiola* (Cogan) previously referred to *Circulifer* Zachvatkin by the present author (Theron, 1970), should also be included in *Neoaliturus*.

Recilia rugulans (Naudé), **comb. nov.**, figs 32–36

Thamnotettix rugulans Naudé, 1926: 75

MALE. Length from apex of crown to tips of tegmina 3,2–3,6 mm. Ground colour stramineous. Head as wide as pronotum, width across eyes 0,84–0,9 mm, indistinctly marked with light brown and fuscous markings; sometimes almost uniformly yellowish. Discal region of crown with small shiny area on each side; head and thorax otherwise as in *R. cotula* (Cogan) (*vide* Theron, 1970).

Pygofer, 10th tergite, plates and valve as in *R. cotula*. Aedeagus only slightly curving dorsally (fig. 34), sharply pointed apically (fig. 35) and with gonopore opening sub-apically on short dorsal extension of aedeagal duct (fig. 36). Styles (fig. 33) with divergent, acuminate apophyses which terminate far from edges of plates; ventral arms long.

FEMALE. Length 3,48–3,64 mm. Width of head across eyes 0,94 mm. Hind margin of 7th abdominal sternite with variable V-shaped incision.

MATERIAL EXAMINED. Naudé states that he described this species from numerous specimens (collected on kikuyu grass), but at present only the holotype female (collected by E. S. Cogan, Cedara, Natal, 11.iii.1917), an allotype male (same data as holotype, but dated 20.iii.1917) and two paratype females (same data as allotype) are present in the collection. Additional specimens from Cedara (Natal), De Doorns (C.P.) and Big Bend and Nomahasha in Swaziland, were however also available for study. *Recilia rugulans* is near to and perhaps conspecific with *Deltocephalus hesperidum* Lindberg, 1958 (subsequently transferred to *Recilia* by Kramer, 1962). Its aedeagus also resembles that of *R. schmidtgeni* Wagner.

Thamnotettix decimnotatus Naudé

The single female (collected at Jonkershoek, Stellenbosch by F. W. Pettey, 17.xii.1922), from which Naudé described this species, is still present in the collection, but no males (or females) can at present be associated with it. Its redescription is therefore kept in abeyance.

Caffrolix conicus (Naudé), **comb. nov.**, figs 37–45

Euscelis conicus Naudé, 1926: 59

MALE. Brachypterous. Length from apex of crown to tips of tegmina 2,96–3,02 mm. Head slightly wider than pronotum, width across eyes 1,24–1,28 mm. Crown medially almost twice as long as next eyes (fig. 37); yellowish-brown in colour; sharply angulate in front (more so in one specimen than in the others), rounded to face; discal region smooth, frontal region and face with fine nodular sculpture. Fronto-clypeus with about 10 fuscous horizontal arcs, abruptly widened above ante-clypeus; latter with lateral margins convex. Gena below lorum slightly narrower than ocellocular region. Inner margin of eye distinctly notched opposite antennal pit. Ocellus separated from eye by distance equal to diameter of ocellus.

Pronotum smooth, maximum width 1,16–1,19 mm, lateral margins very short, non-carinate. Tegmina short, pale greenish or brownish, without appendix; venation not very distinct and with some supernumerary veins; apical cells short. Hind wings very reduced. Spinulation of fore tibia 1 + 4, hind femoral setal formula 2 + 2 + 1.

Tenth tergite massive, strongly sclerotized, with darkly pigmented spot at base (fig. 39). Pygofer deeply incised mid-dorsally. Pygofer lobes relatively small, triangular behind (fig. 40), each sub-apically with medially projecting sharply pointed process on dorsal rim. Valve triangular, truncate or rounded behind. Plates free, outer edges concave, ventro-laterally with irregularly arranged, relatively short macro-setae (fig. 42).

Aedeagus symmetrical (figs 38 & 41). Shaft large, laterally compressed, with gonopore on posterior side and situated far below apex; three pairs of small and one pair of large teeth in vicinity of gonopore; area below gonopore pubescent. Styles with distinct pre-apical angles and large divergent denticulate apophyses (fig. 43). Connective as in fig. 44.

FEMALE. Brachypterous, length 3,04–3,16 mm. Width of head across eyes 1,28–1,36 mm, maximum width of pronotum 1,2–1,24 mm. Crown and tegmina light brown with variable darker brown markings. Hind margin of 7th abdominal sternite as in fig. 45.

MATERIAL EXAMINED. The holotype male and three paratype females (all collected at Jonkershoek, Stellenbosch on 17.xii.1922, by F. W. Pettey), on which Naudé based this species, are still present in the collection, although somewhat discoloured. Additional males from Gouda (C.P.) and Elsenburg, Stellenbosch, were also examined.

Bonaspeia rosea (Naudé), **comb. nov.**, figs 46–52

Euscelis rosea Naudé, 1926: 60–61

MALE. Length from apex of crown to tips of tegmina 3,72–4 mm. Body colour almost uniformly yellowish-brown or greenish. Width of head across eyes 1,42–1,54 mm;

maximum width of pronotum 1,32–1,48 mm. Head, thorax and tegmina otherwise as in *Bonaspeia eriocephala* (Cogan) (*vide* Theron, 1970). Spinulation of fore tibia 3 + 4 or 3 + 5.

Pygofer and anal tube generally as in *eriocephala*; each pygofer lobe dorsally bearing 4 or 5 macro-setae and a strong, postero-ventrally directed acuminate process (fig. 48); apices of these processes diverging. Plates triangular, with irregularly arranged macro-setae (fig. 50). Valve very short and sinuate behind. Shaft of aedeagus with gonopore opening on posterior side of apex, the latter bearing a pair of anteriorly-directed and a pair of ventrally-directed short teeth (figs 46 & 47). Connective as in fig. 51. Styles elongate, with slightly converging denticulate apophyses (fig. 49).

FEMALE. Length 3,72; width across eyes 1,44 mm, maximum width of pronotum 1,34 mm. Hind margin of 7th abdominal sternite with deep V-shaped incision (fig. 52).

MATERIAL EXAMINED. Naudé states that he described this species from 4 males and 3 females, but at present only one male, labelled type, and one female, labelled allotype, is present in the collection (both collected at Jonkershoek, Stellenbosch on 17.xii.1922, by F. W. Pettey). Several other males from the same locality were however also available for study.

Bonaspeia chloridula (Naudé), **comb. nov.,** figs 53–57

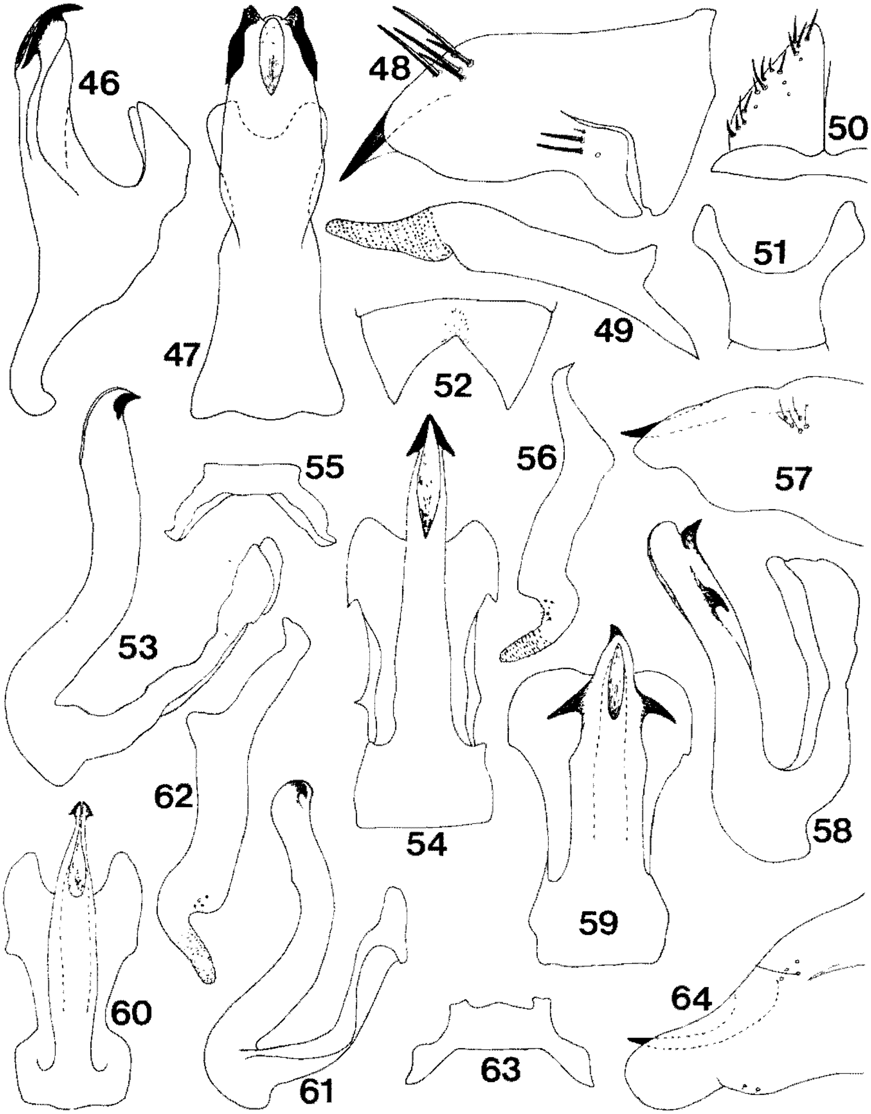
Euscelis choridula Naudé, 1926: 61–62

MALE. Length from apex of crown to tips of tegmina 3,48–4,01 mm. Body uniformly yellowish-green. Width of head across eyes 1,28–1,46 mm. Maximum width of pronotum 1,24–1,44 mm. Tegmina coriaceous and veins indistinct. Hind wings reduced, narrow, translucent, with distinct but reduced venation and characteristically light brown in colour. Head and thorax otherwise as in *B. rosea*. Spinulation of fore tibia 3 + 4.

Pygofer lobes triangular behind, with pygofer process directed caudad (fig. 57); usually only bearing a few weak setae (occasionally 1 or 2 small macro-setae) dorso-laterally. Plates with about 20 strong irregularly-arranged macro-setae. Connective with short stem (fig. 55). Aedeagus with tubular shaft and two small posteriorly-directed apical teeth, which are fused in front of gonopore (figs 53 & 54). Styles with laterally-curved apophyses (fig. 56).

FEMALE. Length 3,52–4,4 mm; width across eyes 1,34–1,6 mm; maximum width of pronotum 1,24–1,48 mm. Hind margin of 7th abdominal sternite as in *B. rosea.*

MATERIAL EXAMINED. Naudé described this species from twelve females and two males. At present the collection contains one female labelled type, and one male labelled allotype (both collected by F. W. Pettey, Jonkershoek, Stellenbosch, 17.xii.1922) and one female labelled "metatype" (same collector, Elsenburg, Stellenbosch, 16.xii.1922). Many additional specimens from Stellenbosch, Wolseley, Rawsonville, Sederberge, Villiersdorp, Paarl, Bainskloof, Franschhoek and Tulbagh were also examined. Naudé gives Ceres as the locality of some of his specimens, but all the specimens, superficially resembling *B. chloridula,* which the present author collected in different parts of this district, belongs to the following new species, in which the aedeagus differs markedly from that of *chloridula.*



Figs 46–64. South African Cicadellidae. 46–52. *Bonaspeia rosea* (Naudé). 46–51. Holotype male. 46 & 47. Aedeagus, lateral and posterior views. 48. Pygofer lobe, lateral view. 49. Left style, ventral view. 50. Plate and part of valve. 51. Connective. 52. Allotype female, 7th abdominal sternite. 53–57. *B. chloridula* (Naudé), holotype male. 53 & 54. Aedeagus, lateral and posterior views. 55. Connective. 56. Right style, ventral view. 57. Pygofer lobe, lateral view. 58–59. *B. ceresi*, spec. nov., holotype male. 58 & 59. Aedeagus, lateral and posterior views. 60–64. *B. petteyi* (Naudé), holotype male. 60 & 61. Aedeagus, posterior and lateral views. 62. Left style, ventral view. 63. Connective. 64. Pygofer lobe, lateral view.

Bonaspeia ceresi, spec. nov., figs 58–59

MALE. Length from apex of crown to tips of tegmina 3,48–4 mm; width of head across eyes 1,28–1,4 mm; maximum width of pronotum 1,24–1,32 mm. Closely resembling *B. chloridula* in structure and colouration, but shaft of aedeagus broad and flattened and laterally with pair of sub-apical teeth, in addition to an apical tooth (figs 58 & 59).

FEMALE. Length 3,84–4,04 mm; width of head across eyes 1,48–1,54 mm; maximum width of pronotum 1,36–1,4 mm. Hind margin of 7th abdominal sternite with V-shaped incision as in *B. chloridula.*

MATERIAL EXAMINED. ♂ Holotype: SOUTH AFRICA: Ceres (Slagboom), 24.x.1970, J. G. Theron. In S.A. Museum, Cape Town. Paratypes: SOUTH AFRICA (C.P.): 14 ♂♂ Ceres (Slagboom and Lindeshof), 29.xii.1967, 13.xii.1969, 24.x.1970, 12.x.1971, 25.x.1971, J. G. Theron. 5 ♀♀ Ceres (Slagboom), 29.xii.1967, 13.xii.1969, J. G. Theron. In S.A. Museum, University of Stellenbosch Collection and National Collection of Insects, Plant Protection Research Institute, Pretoria.

Bonaspeia petteyi (Naudé), **comb. nov.,** figs 60–64

Euscelis petteyi Naudé, 1926: 62

FEMALE. Large, length from apex of crown to tips of tegmina 4,64–4,8 mm. Width of head across eyes 1,76–1,92 mm; maximum width of pronotum 1,64–1,8 mm. Body-colour very variable, ranging from almost uniformly yellowish-brown, to light greenish-brown with numerous black marks on head, thorax and tegmina; dark specimens with 2 black spots near anterior margin of crown. Crown rather bluntly angled in front. Spinulation of fore tibia variable, 4 + 4, 3 + 4, 4 + 5 or 5 + 5. Hind margin of 7th abdominal sternite with deep V-shaped incision, similar to that of *B. rosea.*

MATERIAL EXAMINED. The 2 females labelled type and paratype (collected by F. W. Pettey, Jonkershoek, Stellenbosch, 17.xii.1922), on which Naudé states that he based this species, are still present in the collection. It is strange that in his plates he also figures the genitalia of a male. The present author collected a considerable number of males and females in the same locality and one of the males (J. G. Theron, 15.v.1968) is here designated the neallotype. It is deposited with the other type specimens.

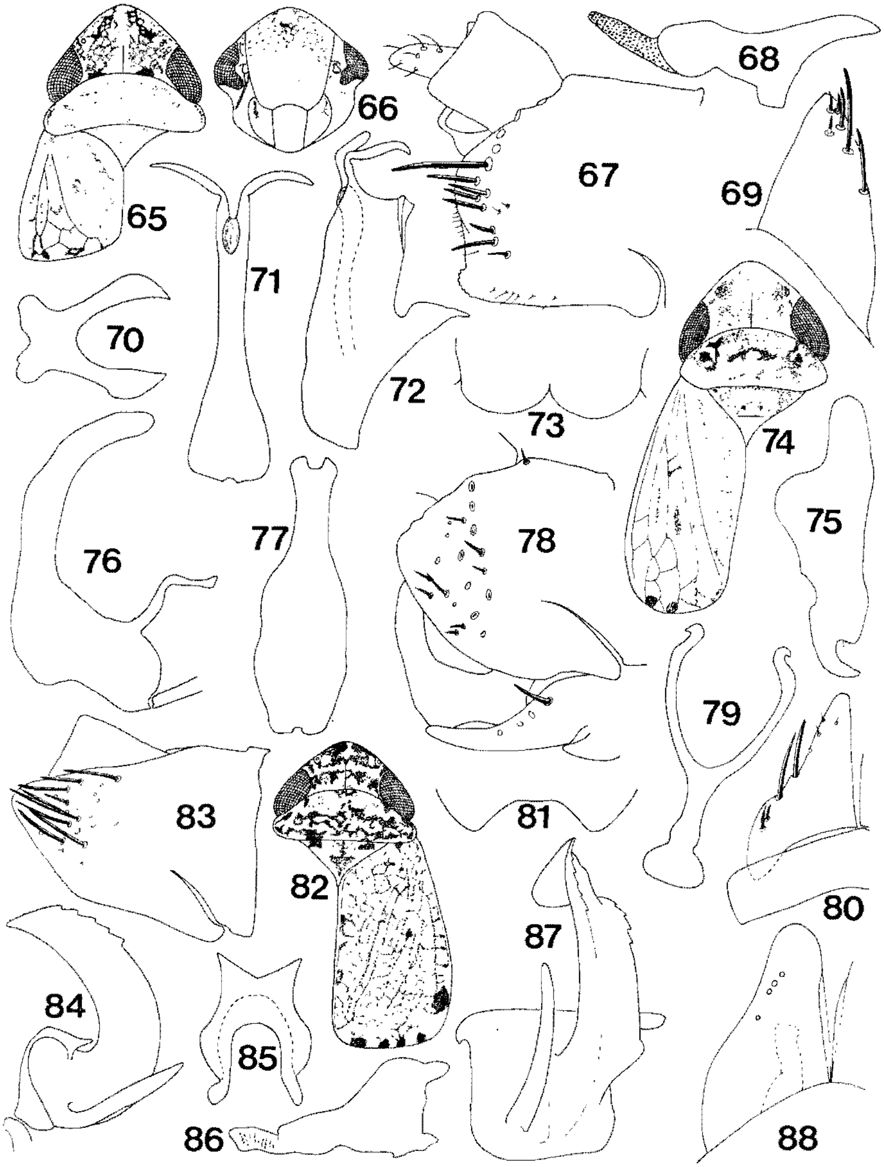
MALE. Length 4,54–5 mm; width of head across eyes 1,72–1,92 mm; maximum width of pronotum 1,52–1,8 mm.

Pygofer lobe with process slightly dorsally curved and bearing a few thin setae or short macro-setae dorsally (fig. 64). Styles with laterally-curved apophyses (fig. 62). Shaft of aedeagus tubular basally, but laterally compressed at apex, which bears two small lateral teeth (figs 60 & 61). Gonopore elongate. Connective as in fig. 63.

Tzitzikamaia adspersa (Naudé), **comb. nov.,** figs 65–73

Euscelis adspersa Naudé, 1926: 63

MALE. Length from apex of crown to tip of abdomen 3,8 mm and to tips of tegmina 2,24 mm in holotype male. Body robust. Ground colour greyish-yellow, with dark brown irrorations. Head wider than pronotum (fig. 65), width across eyes 1,34–1,52 mm. Frontal region of crown very indistinctly rugulose and not separated from discal region.



Figs 65–88. South African Cicadellidae. 65–73. *Tzitzikamaia adspersa* (Naudé). 65–72. Holotype male. 65. Head and thorax, dorsal view. 66. Face. 67. Pygofer, lateral view. 68. Left style, dorsal view. 69. Right plate, ventral view. 70. Connective. 71 & 72. Aedeagus, posterior and lateral views. 73. Female, hind margin of 7th abdominal sternite. 74–81. *Bloemia hieroglyphica* (Naudé). 74–80. Allotype male. 74. Head and thorax, dorsal view. 75. Left style, ventral view. 76 & 77. Aedeagus, lateral and posterior views. 78. Pygofer, lateral view. 79. Connective. 80. Left plate and part of valve, ventral view. 81. Holotype female, hind margin of 7th abdominal sternite. 82–88. *Johanus cypraeus* (Naudé), allotype male. 82. Head and thorax, dorsal view. 83. Pygofer, lateral view. 84. Aedeagus, left side. 85. Connective. 86. Style. 87. Aedeagus, ventral view. 88. Left plate and part of valve, ventral view.

Distance between eye and ocellus about twice diameter of ocellus. Frontoclypeus (fig. 66) with very fine nodular sculpture and weakly punctate. Genae very narrow below lora.

Maximum width of pronotum 1,38–1,56 mm; lateral margins carinate. Scutellum without transverse linear impression. Brachypterous, tegmina coriaceous, with reduced venation. Hind wings very reduced. Spinulation of fore tibiae 5 + 4, hind femoral setal formula 2 + 2 + 1.

Anal tube extending beyond pygofer (fig. 67); tenth tergite well sclerotized. Pygofer rather shallowly incised dorsally. Pygofer lobes short, truncate behind, each bearing about 12 stout macro-setae of various lengths; postero-ventrally with small denticulate lobes. Valve triangular. Plates triangular, bearing a few rather scattered stout macro-setae of varying lengths (fig. 69).

Aedeagus laterally compressed, with reduced socle (figs 71 & 72); shaft very broad in lateral view and apically bearing two anteriorly-directed falcate appendages; gonopore apical on posterior surface. Connective as in fig. 70. Styles as in fig. 68, with apophyses denticulate and terminating far from apices of plates.

FEMALE. Length from apex of crown to tip of abdomen 3,76–4,32 mm; width of head across eyes 1,48–1,56 mm; maximum width of pronotum 1,52–1,6 mm. Hind margin of 7th abdominal sternite bilobed.

MATERIAL EXAMINED. The single male (collected at Petrusburg, O.F.S., 22–25.iv.1918, by J. C. Faure), on which Naudé based this species, is still present in the collection. Two males and four females from Murraysburg, C.P. and Durban, were also available for study, as well as some very closely related if not conspecific specimens from Bethlehem and Ermelo.

According to Linnavuori (1961) the spinulation of the fore tibiae is 4 + 5 in the genus *Tzitzikamaia*, but in all specimens of this genus, examined by the present author, the spinulation was typically 5 + 4. The macro-setae on the genital plates are also rather scattered and not distinctly uniseriate as stated by Linnavuori.

BLOEMIA gen. nov.

Type-species: *Euscelis hieroglyphica* Naudé

The species *hieroglyphica* should not be included in the genus *Euscelis* Brullé and a new genus *Bloemia* of the tribe Euscelini, with the following characteristics, is proposed here.

Brachypterous leafhoppers with head slightly wider than pronotum. Crown medially produced and rounded to face; discal region smooth; frontal region and face with very fine modular sculpture, frontal region medially also rugulose. Ocellus separated from adjacent eye by distance about three times diameter of ocellus. Fronto-clypeus broadening upwards; ante-clypeus broadening slightly apically and not extending beyond genae. Width of gena below lorum about one-quarter width of ocellocular region.

Lateral margins of pronotum short, non-carinate. Scutellum with fine nodular sculpture and distinct transverse impression. Tegmina coriaceous, abbreviated, rounded behind, with very short apical cells and no appendix. Hind wings very reduced. Hind femoral setal formula 2 + 2 + 1; spinulation of fore tibiae unknown (fore legs missing in all specimens examined).

Tenth tergite well sclerotized and ventrally with two processes articulating with aedeagus. Pygofer extensive mid-dorsally. Pygofer lobes short, rounded behind, without processes. Valve same length throughout (fig. 80). Plates triangular with few uniseriate macro-setae. Aedeagus symmetrical, with dorsally-curving shaft and apical gonopore. Connective with slender arms and stem (fig. 79). Stylus with hooked apophysis (fig. 75), which only extend posteriorly for about one-third length of plates.

Bloemia hieroglyphica (Naudé), **comb. nov.**, figs 74–81

Euscelis hieroglyphica Naudé, 1926: 63–64

MALE. Length from apex of crown to tips of tegmina 2,72 mm; width of head across eyes 1,14 mm; maximum width of pronotum 1,1 mm. Ground colour yellowish-brown. Crown, pronotum and scutellum marked with darker brown, as shown in fig. 74. Tegmina with veins dark brown and membrane yellowish-brown, suffused with brown.

Pygofer lobe with 7 or 8 long macro-setae and a few shorter setae (fig. 78). Plates with 2 or 3 long macro-setae (fig. 80). Aedeagus bilobed apically (figs 76 & 77).

FEMALE. Length from apex of crown to tips of tegmina 2,88 mm, to tip of abdomen 3,56 mm. Width of head across eyes 1,26 mm; maximum width of pronotum 1,24 mm. Hind margin of 7th abdominal sternite as in fig. 81.

MATERIAL EXAMINED. The two females, labelled type and paratype respectively, and the single male, labelled allotype (all collected at Bloemfontein, 14.iv.1918, by J. C. Faure), on which Naudé based this species, are still present in the collection. No other specimens were available for study.

JOHANUS gen. nov.

Type-species: *Euscelis cypraea* Naudé

The asymmetrical male genitalia of *cypraea* indicate that it cannot be included in *Euscelis*. Although the genitalia in some respects resemble those of the genera *Bilusius* Ribaut, *Streptanus* Ribaut and *Phycotettix* Haupt, other characters of this species differ considerably and a new genus *Johanus* is therefore proposed here.

Brachypterous leafhoppers, with short, squat body and pronotum, scutellum and tegmina distinctly arched in lateral view. Head slightly narrower than pronotum (fig. 82). Crown short, about as long as pronotum and acutely angled with face; discal region smooth, distinctly separated from frontal region, which is transversely rugulose and slightly upturned. Ocelli on anterior margin of crown; separated from eyes by distance about twice diameter of ocellus. Fronto-clypeus broadening upwards, with fine nodular sculpture, weak punctuations and 6 distinct dark horizontal arcs. Ante-clypeus broadening slightly apically, not extending beyond genae; width of gena below lorum about half width of ocellocular region.

Lateral margins of pronotum short, carinate. Scutellum with weak nodular sculpture and distinct transverse impression. Tegmina coriaceous, abbreviated, hind margin truncate; no appendix; venation obsolete. Hind wings small, with distinct but reduced venation. Hind femoral setal formula 2 + 2 + 1; fore tibiae missing in both type-specimens, but spinulation 1 + 4 in another specimen.

Tenth tergite large, well sclerotized, ventrally articulating with transverse bar, from which aedeagus is suspended. Pygofer fairly deeply incised mid-dorsally. Pygofer lobes setulose, but without processes (fig. 83). Plates triangular with few uniseriate macro-setae (fig. 88). Aedeagus asymmetrical with anteriorly curved, much flattened and apically twisted shaft (figs 84 & 87). Connective stout (fig. 85). Apophysis of style (fig. 86) extending posteriorly for about half length of plate. Valve triangular.

Johanus cypraeus (Naudé), **comb. nov.,** figs. 82–88

Euscelis cypraea Naudé, 1926: 64–65

MALE. Length from apex of crown to tips of tegmina 3,08–3,4 mm. Ground colour greyish-white, mottled with yellow and dark brown. Tegmina greyish, with dark brown reticulations; hind margin with four small brown spots and costal margin with large brown spot. Width of head across eyes 1,38–1,5 mm; maximum width of pronotum 1,44–1,56 mm. Pygofer lobes with about 15 macro-setae each. Twisted apex of aedeagal shaft serrate and socle with long pointed process on left side (figs 84 & 87); gonopore apical.

FEMALE. Length 3,2 mm; width across eyes 1,44 mm; maximum width of pronotum 1,48 mm. Abdomen missing in holotype, but 7th abdominal sternite figured by Naudé.

MATERIAL EXAMINED. The single female, labelled type (collected by F. W. Pettey, Jonkershoek, Stellenbosch, 17.xii.1922) and single male, labelled allotype (same collector, Elsenburg, Stellenbosch, 16.xii.1922), on which Naudé based this species, are still present in the collection, although somewhat damaged. Another male collected at Rawsonville, was also studied.

HADROCA gen. nov.

Type-species: *Euscelis ramosa* Naudé

The species *ramosa* cannot be included in the genus *Euscelis* and a new genus *Hadroca* (of the tribe Euscelini), with the following characteristics, is proposed here.

Brachypterous leafhoppers, with body stout and pronotum, scutellum and tegmina arched in lateral view. Head slightly wider than pronotum (fig. 89). Crown slightly shorter than pronotum and rounded to face; discal region smooth, frontal region transversely rugulose. Ocelli on anterior margin of crown, separated from eyes by distance about twice diameter of ocellus. Fronto-clypeus broadening upwards, with fine nodular sculpture, weak punctuations and horizontal arcs. Ante-clypeus not extending beyond genae and its sides slightly convex; width of gena below lorum about one-quarter width of ocellocular region.

Lateral margins of pronotum short, weakly carinate. Scutellum with fine nodular sculpture and distinct transverse impression. Tegmina coriaceous, short, fairly straight behind; no appendix; venation obsolete, but with reticulations; claval suture distinct. Hind wings small, with very reduced but distinct venation. Hind femoral setal formula 2 + 2 + 1; spinulation of fore tibiae 4 + 4.

Tenth tergite well developed, antero-ventrally with heavily sclerotized extension on each side. Pygofer not deeply incised mid-dorsally. Pygofer lobes with strong macro-setae (fig. 92). Plates triangular, with uniseriate macro-setae (fig. 91). Aedeagus symmetrical, tubular, curving dorsally and without socle (figs 94 & 95); gonopore subapical, on anterior surface. Connective with elongate stem (fig. 93). Styles small, apophyses short, hardly reaching bases of plates (fig. 96). Valve triangular.

Hadroca ramosa (Naudé), **comb. nov.,** figs 89–96

Euscelis ramosa Naudé, 1926: 65-66

FEMALE. Length from apex of crown to tips of tegmina 3,13–3,52 mm, to tip of abdomen 4–4,5 mm. Ground colour creamy; head, thorax, tegmina and abdomen with very variable black pigmentation. Width of head across eyes 1,56–1,68 mm. Fronto-clypeus with about 10 distinct horizontal arcs. Tegmina with indistinct venation and usually with black reticulations. 7th abdominal sternite medially with notch, which bears a tooth (fig. 90).

MATERIAL EXAMINED. Naudé states that he described this species from 2 females (collected by F. W. Pettey, Jonkershoek, Stellenbosch, 17.xii.1922) and these specimens (labelled type and paratype) are still present in the collection. However, in his figures he also depicts the terminal abdominal segments of a male. In the present study numerous specimens (including many males) from the type-locality, as well as Franschhoek Pass and Sir Lowry's Pass, were available and the structure of the male genitalia could therefore be ascertained.

MALE. Length from apex of crown to tips of tegmina 3,04–3,14 mm, to tip of abdomen 3,64–3,88 mm. Width of head across eyes 1,48–1,6 mm. Maximum width of pronotum 1,4–1,52 mm. Pygofer with about 15 strong macro-setae. Plates sharply pointed behind and bearing about 7 macro-setae each. Apophysis of style with pointed apex curving ventrally. Aedeagus with apex notched (fig. 95).

CAPOIDEUS gen. nov.

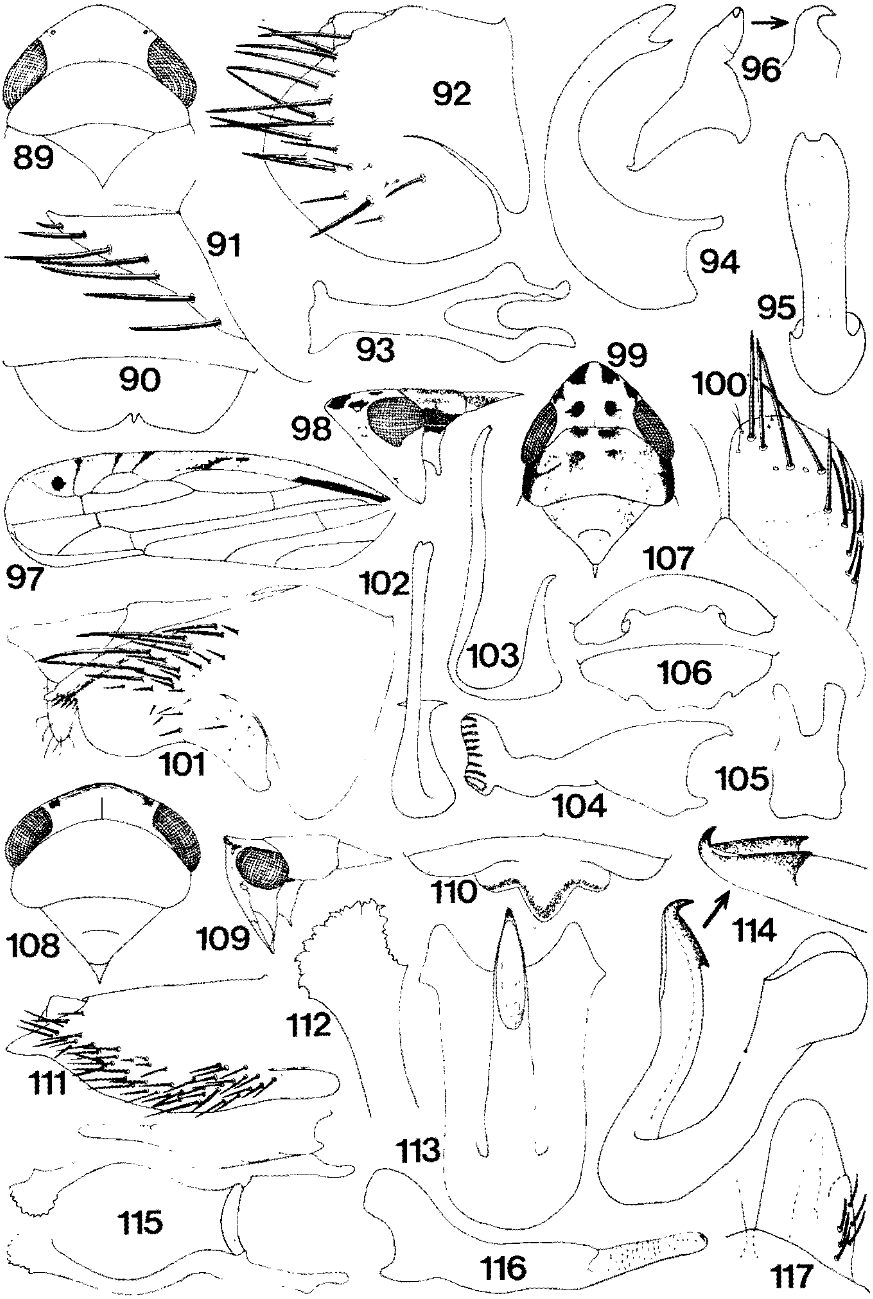
Type-species: *Scaphoideus cuprescens* Naudé

Linnavuori (1961) stated that this species should not be included in *Scaphoideus* Uhler and that he will describe a new genus for it later. However, as this description has not been forthcoming, the above new genus, related to *Afroideus* Linnavuori, is proposed here.

Elongate, elegant leafhoppers with the head slightly narrower than the pronotum. Crown produced in front (figs 98 & 99), twice as long medially as next eyes; fairly sharply angled with face; frontal region granular, discal region smooth. Ocelli on anterior margin of crown, very close to eyes, separated from adjacent eyes by less than diameter of ocellus. Fronto-clypeus wedge-shaped, narrow, without horizontal arcs.

EXPLANATION OF FIGURES

Figs 89–117. South African Cicadellidae. 89–96. *Hadroca ramosa* (Naudé). 89–96. Holotype female. 89. Head, pronotum and scutellum, dorsal view. 90. Seventh abdominal sternite. 91–96. Male. 91. Plate and part of valve. 92. Pygofer, lateral view. 93. Connective. 94 & 95. Aedeagus, lateral and posterior views. 96. Left style, ventral view, and enlarged apex of style drawn in lateral view. 97–107. *Capoideus cuprescens* (Naudé). 97. Tegmen. 98–105. Holotype male. 98 & 99. Head, pronotum and scutellum, lateral and dorsal views. 100. Left plate and part of valve, ventral view. 101. Pygofer, lateral view. 102 & 103. Aedeagus, ventral and lateral views. 104. Left style, ventral view. 105. Connective. 106–107. Allotype female, 7th abdominal sternite, ventral and postero-ventral views. 108–117. *Distantia planescens* (Naudé). 108–110. Holotype female. 108–109. Head, pronotum and scutellum, dorsal and lateral views. 110. Seventh abdominal sternite. 111–117. Neallotype male. 111. Pygofer, lateral view. 112. Apex of pseudostylus. 113. Aedeagus, ventral view. 114. Aedeagus, lateral view, and apex of shaft enlarged and drawn in dorso-lateral view. 115. Pseudostyli, dorsal view. 116. Style. 117. Right plate and part of valve, ventral view.



Ante-clypeus broadening apically, not extending beyond genae; width of gena below lorum about equal to width of ocellocular region. Lora narrow. Genae only very shallowly notched below eyes.

Lateral margins of pronotum fairly long, parallel and carinate. Scutellum with distinct transverse impression. Tegmina long, narrow, with well developed appendix (fig. 97); two closed ante-apical cells, the outer one small; costal area with 3 reflexed veins. Hind wing with 4 apical cells. Hind femoral setal formula 2 + 2 + 1; spinulation of fore tibiae 3 + 4.

Tenth tergite weakly sclerotized; anteriorly with deep V-shaped incision. Anal tube extending beyond pygofer, which is conical and deeply invaded middorsally by the anal tube. Pygofer lobes triangular, not strongly sclerotized and laterally with macro-setae (fig. 101); each internally with setose area, dorsally with sub-marginal ridge. Plates lobular, broadly rounded behind and bearing number of scattered macro-setae (fig. 100). Aedeagus symmetrical, with shaft long, thin, tubular, arising from ventral part of socle (figs 102 & 103) and directed posteriorly; gonopore apical. Connective with short parallel arms and broad stem (fig. 105). Styles with apophysis terminating in transverse tooth-bearing bar (fig. 104). Valve large, triangular.

Capoideus cuprescens (Naudé), **comb. nov.,** figs 97–107

Euscelis cuprescens Naudé, 1926: 43

MALE. Length from apex of crown to tips of tegmina 5,58–5,83 mm. Width of head across eyes 1,22–1,34 mm. Ground colour greyish-brown. Crown with pair of black areas at apex, behind ocelli and between eyes. Face and venter of body pale yellow. Pronotum with black or brownish marks, as shown in fig. 99.

Tegmina sub-hyaline, with costal margin white, opaque; costal area basally with narrow black band (fig. 97); 4th apical cell with black spot. Pygofer lobes dorso-laterally with large number of macro-setae and ventrally with smaller setae. Shaft of aedeagus abruptly curved and slightly notched apically. Apophyses of styles with 10 tooth-bearing ridges on ventral side. Plates with about 15 scattered macro-setae.

FEMALE. Length 6–6,33 mm; width across eyes 1,38–1,42 mm; maximum width of pronotum 1,34–1,48 mm. 7th abdominal sternite with lateral parts curving inwards (figs 106 & 107).

MATERIAL EXAMINED. Naudé described this species from five males and one female, collected by F. W. Pettey at Jonkershoek, Stellenbosch, 17.xii.1922. At present 1 male labelled type, 1 female labelled allotype and 3 males labelled paratype, are present in the collection. Additional specimens from the type locality, Caledon, Bainskloof and Tulbagh were also studied.

Capoideus differ from *Afroideus* mainly in the spinulation of the tibiae and the structure of the male genitalia.

Distantia planescens (Naudé), **comb. nov.,** figs 108–117

Selenocephalus planescens Naudé, 1926: 41

FEMALE. Length from apex of crown to tips of tegmina 7,9–10 mm. Body colour almost uniformly yellowish. Head wider than pronotum (fig. 108), width across eyes 2,28–2,76 mm. Crown very slightly longer medially than next eyes, anteriorly sharply angled with face (fig. 109); anterior edge slightly upturned and bearing several closely parallel rugae, which extend between ocelli; discal region smooth. Each ocellus separated from adjacent eye by distance equal to its diameter; small dark area present behind ocellus. Face very broad; fronto-clypeus wedge-shaped, granular, without distinct horizontal arcs; ante-clypeus widening slightly apically. Width of gena below lorum slightly less than that of ocellocular region. Gena weakly notched below eye.

Maximum width of pronotum 2,08–2,56 mm; weakly transversely rugulose; lateral margins parallel, weakly carinate, with small black area below carina. Tegmina hyaline, with two closed ante-apical cells and distinct appendix. Fore tibiae with 5 or 6 macro-setae in outer row, but setae of inner row variable in number and size (apical seta of this row always large); hind femoral setal formula usually 2 + 2 + 1, but sometimes 2 + 2 or 2 + 1 + 1.

Abdomen dorsally with dark markings. 7th abdominal sternite posteriorly with medially attached trilobite extension (fig. 110).

MATERIAL EXAMINED. The unique female (collected by J. C. Faure, Petrusburg, O.F.S., 22–25.iv.1918) on which Naudé based this species, is still present in the collection. Many additional specimens, collected at Bronkhorstspruit, Otjiwarango (S.W.A.), Tsumeb (S.W.A.), Nuragas (S.W.A.), Mafa (S.W.A.), Pretoria, Johannesburg and Grootdraai (N.E. Tvl.), were however available for study and a male (collected at Pretoria by D. P. Annecke, iv.1971) is here designated the neallotype. It will be deposited with the holotype.

MALE. Length 7,25–9 mm; width of head across eyes 2,08–2,56 mm; maximum width of pronotum 1,96–2,36 mm.

Tenth tergite usually poorly sclerotized and anal tube very small, not extending beyond elongate conical pygofer and arising from small almost circular excision in dorsal wall of pygofer; latter therefore very extensive dorsally (fig. 111). Pygofer lobes sharply pointed or slightly rounded behind; without appendages but ventro-laterally with numerous macro-setae. Valve triangular. Plates rounded or more or less truncate behind and bearing 4–6 scattered macro-setae ventro-laterally near base (fig. 117); outer edge basally thickened and folded inwards.

Aedeagus symmetrical, with large socle (figs 113 & 114); shaft tubular and directed posteriorly, with gonopore sub-apical on ventral side. Apex of shaft dorsally with hook and two short parallel flanges. Styles narrow, elongate, with long straight denticulate apophyses and distinct pre-apical angles (fig. 116). Connective highly modified; represented by two elongate pseudostyli, interconnected by relatively weak transverse bar (fig. 115). Anterior extremities of pseudostyli articulating with reduced ventral arms of styles; posterior extremities rounded, flattened and marginally denticulate (fig. 112).

Distantia planescens appears to be closly related to *D. aurea* Linnavuori and *D. variabilis* (Evans).

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